

Clean Water

starts with you

The DNR tests waters throughout Iowa to make sure they are meeting state water quality standards. Those standards are in place to protect drinking water, aquatic life and recreational uses, like swimming. When a stream or lake doesn't meet those standards, the stream or lake is placed on the state's impaired waters list. The DNR then creates a plan which outlines ways Iowans can help improve the water quality in their community's lakes and streams.

DNR needs your input

Every Iowan needs the help of their fellow citizens and watershed groups to improve water quality in their community. If you or your group would like to meet with a DNR staff member to discuss water quality, please contact Chris Van Gorp at (515) 281-4791 or Chris.VanGorp@dnr.state.ia.us

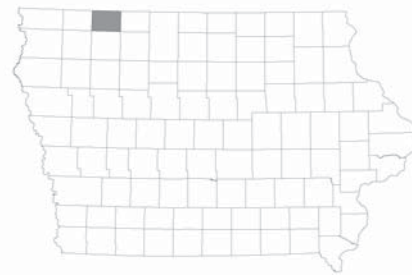


For more information on water quality improvement plans, please visit www.iowadnr.com/water/watershed/

Milford Creek

Pollutant: *Phosphorus*

Pollution Sources: *Point and nonpoint*



Milford Creek needs your help. As you'll read below, the DNR has developed a plan which outlines the stream's problems and possible solutions.

But it's up to you to make sure those solutions are put into effect. A healthier Milford Creek depends on you.

What's wrong with the stream?

Excessive amounts of algae in the stream are violating the state's water quality standards for dissolved oxygen.

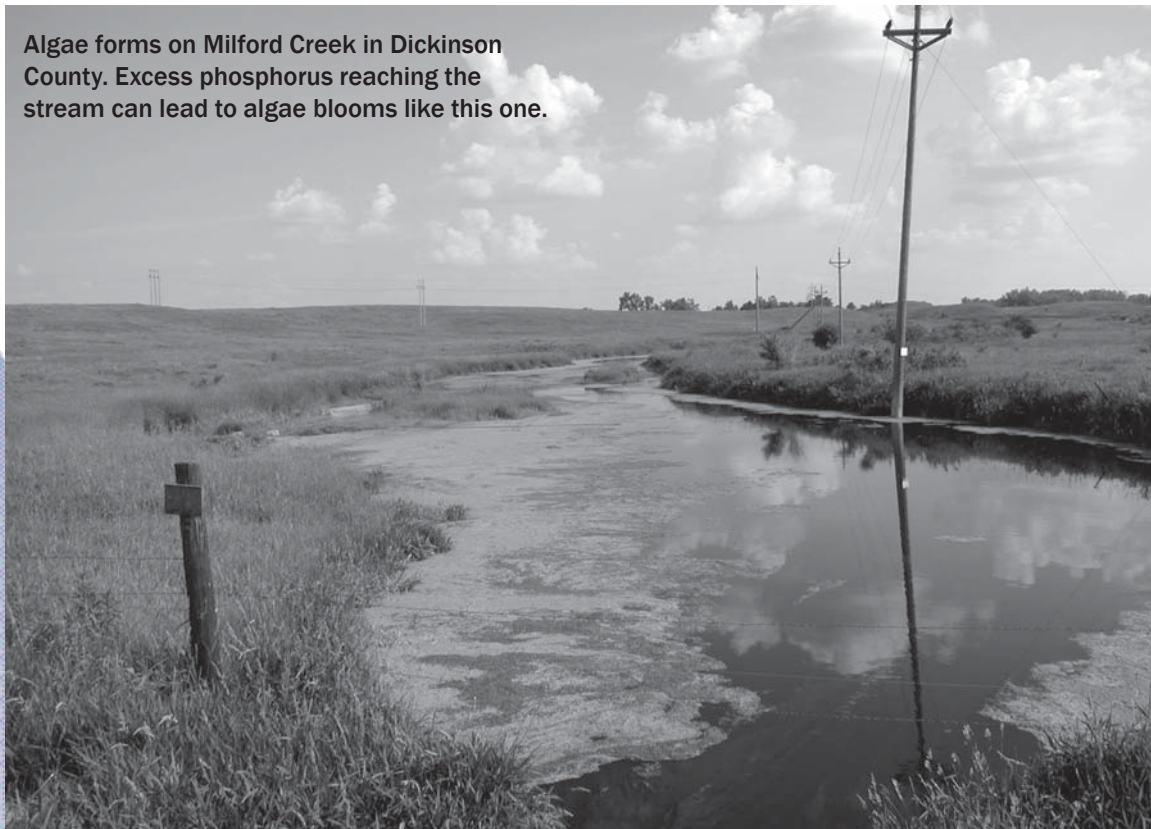
Too much algal growth results in low nighttime levels of dissolved oxygen in the stream, as well as extreme fluctuations in oxygen levels that stress the aquatic life, including fish.

This has resulted in a chronic impairment to the stream's fish and invertebrate communities.

What is causing the problem?

The excessive algal growth in Milford Creek is caused by a combination of physical factors and the overabundance of plant nutrients, specifically phosphorus.

Algae forms on Milford Creek in Dickinson County. Excess phosphorus reaching the stream can lead to algae blooms like this one.



Phosphorus causes excessive plant growth in the stream, especially during low flow conditions and warm temperatures. This leads to extreme levels of nighttime respiration by algae and decomposition of dead plants, both of which deplete oxygen levels in the stream.

How do we improve Milford Creek?

To improve dissolved oxygen levels and restore aquatic health in Milford Creek, phosphorus loading to the stream needs to be reduced significantly and the stream's physical conditions need to be improved.

Reducing phosphorus inputs from point and nonpoint sources will help limit algae growth during critical conditions in late summer. Reducing stream temperature and light availability will also limit algal growth.

Phosphorus removal in wastewater treatment, reductions in urban and agricultural storm water runoff, and the lowering of lake nutrient concentrations in Lower Gar Lake and the upper Iowa Great Lakes will all help improve water quality in Milford Creek.

Who is responsible for a clean creek?

The water quality in Milford Creek is a shared responsibility and improving it must be considered a cooperative effort.

Government and wastewater treatment facilities will be responsible for adjusting effluent limits from point sources, while nonpoint sources can be influenced by everyone living or working in the watershed.

Upper right: The Milford Creek watershed. A watershed is an area of land that drains into a body of water. In this case, the land within the thick black line drains into Milford Creek.

Lower right: The Iowa Great Lakes watershed. Milford Creek drains the Iowa Great Lakes, so efforts in the Great Lakes watershed will also improve water quality in Milford Creek.

Landowners, tenants, businesses, and citizens alike have the ability to improve management practices in the watershed and educate others about why Milford Creek needs their help and what they can do.

